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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/179,156	10/26/1998	HIDEKI WATANABE	FUJS-15.541	5362

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT PAPER NUMBER

2617

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/179,156

Applicant(s)

WATANABE, HIDEKI

Examiner

Naghmeh Mehrpour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 and 36-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 36-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/11/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed reference listed in the information Disclosure Submitted on 09/11/06 have been considered by the examiner (see attached PTO-1449

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-16, 34, 36-41**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (US Patent Number 5,309,502) and Sevic et al. (US Patent Number 6,069,525) in view of Peterzell et al. (US Patent 5,930,692).

Regarding **Claims 1-3, 17, 34**, Hirai teaches a radio receiver comprising plural communication systems each of which deals with a radio signal having a different power-density spectrum (cordless and cellular) radio, and an control portion 29 (see figure 1, col 3 lines 30-40, lines 50-63). The controller is used to control the positions of switches and monitors the received signals. Hirai teaches that the control portion select transceiver to be used according to the received signal (col 3 lines 50-64, col 4 lines 1-

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11, lines 48-60). Hirai fails to disclose that the transceivers includes plurality of amplifier (col 3 lines 50-64, col 4 lines 48-60). However Sevic teaches an amplifier circuit comprising: plural amplifiers a selection control portion 102 to select an amplifier a waiting mode corresponding one of the radio communication system mode, the radio receiving system further comprising: a control unit 100 which selects, an amplifier based on received radio signal, a radio communication mode from the plural types of radio communication modes, and uses an amplifier corresponding to the selected waiting mode corresponding to the one of the amplifier radio communication mode from the plural types of amplifiers (See figure 1 numerals 104a-104n, 102, Col 5 lines 37-44). Sevic and Hirai both teach a circuit that have control unit and selects different equipment based on the circuit needs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Sevic with Hirai, it order to enable the users to select any of the dual system that they desire. Hirai teaches a radio receiver wherein the plural types of the radio communication system comprises a first communication system and a second communication system whose permissible noise signal levels differs from each other, the noise signal being caused to the received signal of itself due to that of the other radio communication systems which differs from the former (Col 3 lines 25-31). Hirai fails to teach that the amplifiers, and each amplifiers being set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier. However Sevic teaches the amplifiers being each set with a different bias current

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amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier (See figures 2, 3, Col 5 lines 7-12, lines 37-42) . In Figure 3, Curve 302a is for FM system and 302b for CDMA system, curve 302a shows less current than curve 302B. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in, order to provide a system which works with different noise level.

Regarding **Claim 4**, Hirai modified by Sevic does not show that a radio receiver wherein the output selection portion is entered to the down converter IF mixer. The amplifiers are each constructed as one adapted for intermediate frequency (IF) band which amplifies the radio signal of the IF band. However, Peterzell discloses a radio receiver wherein the output selection portion is entered to the down converter IF mixer 705 (See figure 7, Col 6 lines 34-42). The amplifiers are each constructed as one adapted for intermediate frequency (IF) band which amplifies the radio signal of the IF band (See figure 7, numerals 708, 710, 709, 711). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Peterzell to Hirai modified by Sevic, in order to improve the system performance by enhancing the interference immunity without degrading the sensitivity receive signal level..

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Regarding **Claims 5, 8-10**, Hirai teaches a radio receiver wherein the plural types of the radio communication system comprises a first communication system and a second communication system whose permissible noise signal levels differs from each other, the noise signal being caused to the received signal of itself due to that of the other radio communication systems which differs from the former (Col 3 lines 25-31). Hirai fails to teach that the amplifiers, and each amplifiers being set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier. However Sevic teaches the amplifiers being each set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier (See figures 2, 3, Col 5 lines 7-12, lines 37-42) . In Figure 3, Curve 302a is for FM system and 302b for CDMA system, curve 302a shows less current that curve 302B. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in, order to provide a system which works with different noise level.

Regarding **Claims 6-7**, Hirai teaches a radio receiver comprising plural communication systems. Hirai detecting circuit fails to show that whether the first or second communication system will be used, wherein if the first communication system is detected the output of the distributing switch is switched to the first amplifiers, and if the second communication system is detected the output of the distributing switch is

switched to the second amplifier side. However Sevic control circuit 102 is capable to detect that whether the first or second communication system will be used, wherein if the first communication system is detected the output of the distributing switch is switched to the first amplifiers, and if the second communication system is detected the output of the distributing switch is switched to the second amplifier, the control circuit determine whether a dual mode CDMA/AMPS mode of operation should be used (Col 4 lines 39-44, Col 5 lines 65-68, Col 6 lines 43-58, lines 1-5).). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in order to provide a good quality dual system.

Regarding **Claims 11, 14, 16**, Hirai teaches a radio receiver wherein the plural types of the radio communication system comprises a first communication system and a second communication system whose permissible noise signal levels differs from each other, the noise signal being caused to the received signal of itself due to that of the other radio communication systems which differs from the former (Col 5 lines 45-55, Col 6 lines 20-28). Hirai fails to teach that the amplifiers, and each amplifiers being set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier. However Sevic teaches the amplifiers being each set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier (See figures 2, 3, Col 5 lines 7-12,

lines 37-42). In Figure 3, Curve 302a is for FM system and 302b for CDMA system, curve 302a shows less current than curve 302B. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in order to provide a system which works with different noise level.

Regarding **Claims 12-13, 15**, Hirai teaches a radio receiver comprising plural communication systems (col 2 lines 59-68). Hirai detecting circuit fails to show that whether the first or second communication system will be used, wherein if the first communication system is detected the output of the distributing switch is switched to the first amplifier, and if the second communication system is detected the output of the distributing switch is switched to the second amplifier side. However Sevic's control circuit 102 is capable to detect that whether the first or second communication system will be used, wherein if the first communication system is detected the output of the distributing switch is switched to the first amplifier, and if the second communication system is detected the output of the distributing switch is switched to the second amplifier, the control circuit determine whether a dual mode CDMA/AMPS mode of operation should be used (Col 4 lines 39-44, Col 5 lines 65-68, Col 6 lines 43-58, lines 1-5). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in order to provide a dual mode communication system that can operate in two different standards (CDMA/AMPS), and benefit of a high linearity amplifier for CDMA mode, while using operates in AMPS mode with no in-band linearity requirement.

Regarding **Claims 36-41**, Hirai teaches a radio receiver comprising:

A first amplifier (col 3 lines 50-64, col 4 lines 1-11, lines 48-60);

Hirai teaches that the control portion select transceiver to be used according to the received signal. Hirai fails to disclose that the transceivers includes: a second amplifier; However Sevic teaches an amplifier circuit comprising: plural amplifiers a selection control portion 102 to select an amplifier a waiting mode corresponding one of the radio communication system mode, the radio receiving system further comprising: a control unit 100 which selects, an amplifier based on received radio signal, a radio communication mode from the plural types of radio communication modes, and uses an amplifier corresponding to the selected waiting mode corresponding to the one of the amplifier radio communication mode from the plural types of amplifiers (See figure 1 numerals 104a-104n, 102, Col 5 lines 37-44). Sevic and Hirai both teach a circuit that have control unit and selects different equipment based on the circuit needs. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Sevic with Hirai, in order to enable the users to select any of the dual system that they desire. Hirai teaches a radio receiver wherein the plural types of the radio communication system comprises a first communication system and a second communication system whose permissible noise signal levels differs from each other, the noise signal being caused to the received signal of itself due to that of the other radio communication systems which differs from the former (Col 3 lines 25-31). Hirai fails to teach that the amplifiers, and each amplifiers being set with a different bias

current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier. However Sevic teaches the amplifiers being each set with a different bias current amount so as to each achieve an operating condition meeting the permissible noise signal level, and the bias current amount of the first amplifier is set greater than of the second amplifier (See figures 2, 3, Col 5 lines 7-12, lines 37-42) . In Figure 3, Curve 302a is for FM system and 302b for CDMA system, curve 302a shows less current than curve 302B. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in, order to provide a system which works with different noise level.

4. **Claims 42**, is rejected under 35 U.S.C. 103(a) as being unpatentable over are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (US Patent Number 5,309,502) and Sevic et al. (US Patent Number 6,069,525) .

Regarding **Claim 42**, Hirai teaches a radio receiver comprising plural communication systems. Hirai detecting circuit fails to show that whether the first or second communication system will be used, wherein if the first communication system is detected the output of the distributing switch is switched to the first amplifiers, and if the second communication system is detected the output of the distributing switch is switched to the second amplifier side. However Sevic control circuit 102 is capable to detect that whether the first or second communication system will be used, wherein if

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the first communication system is detected the output of the distributing switch is switched to the first amplifiers, and if the second communication system is detected the output of the distributing switch is switched to the second amplifier, the control circuit determine whether a dual mode CDMA/AMPS mode of operation should be used (Col 4 lines 39-44, Col 5 lines 65-68, Col 6 lines 43-58, lines 1-5).). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to provide above teaching of Sevic to Hirai, in order to provide a good quality dual system.

Response to Arguments

5. Applicant's arguments with respect to claims 1-16, 34, 36-42, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

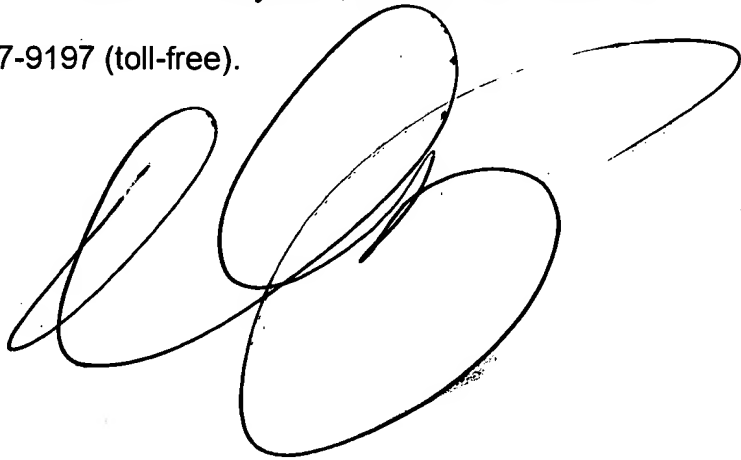
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro be reached (571) 272-7876.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

December 7, 2006

A large, stylized handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.